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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,068	12/06/2001	Hwan Won Kye	0630-1379P	4856

2292 7590 01/05/2007  
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EXAMINER
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CHO, HONG SOL

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/05/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	Application No. 10/003,068	Applicant(s) KYE, HWAN WON	
	Examiner Hong Cho	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |



## **DETAILED ACTION**

### ***Response to Amendment***

1. This office action is in response to the amendment filed on 10/23/2006. Claims 1-22 are pending in the instant application.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-5 and 17-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to data structures, which is non-statutory subject matter. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

### ***Claim Rejections - 35 USC § 112, First paragraph***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to



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which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 18-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. "Computer readable medium" in claim 18 is a new matter.

Claims 19-22 depend on claim 18 are similarly rejected.

***Claim Rejections - 35 USC § 112, Second paragraph***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 14, it lacks an antecedent basis for the third EH\_TYPE packet.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-9, 11-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bunn et al (US 2002/0073227), hereinafter referred to as Bunn, in view of admitted prior art, which is shown as conventional art in figure 1.

Re claims 6, 11, 15 and 16, Bunn discloses sending a message (*a first packet*) to a cable modem termination system (CMTS, *a receiver*) designating support for extended protocol (*a payload header suppression rule*) (*transmitting a first packet according to change in a payload header suppression rule to a receiver when the payload header suppression rule changes, in the case where communication is performed between a sender and the receiver*, paragraph [0099], lines 1-5), checking whether there exists an error in the first packet (error checking is inherently done in a frame at data link layer), responding whether an extended protocol is supported by sending a message (*a second packet*) (*determining whether to apply a new payload header suppression rule on the basis of the first packet, and transmitting a second packet to the sender*, paragraph [0100], lines 1-3) and formatting data packets (*a third packet*) for transmission to a cable modem termination system (CMTS) in accordance with extended protocol if the CMTS supports the extended protocol (*terminating transmission of a common payload header suppression packet, setting a packet type as a third packet, suppressing a packet into a new channel, and transmitting the packet when the second packet is a success message*, figure 4, element 408, paragraph [0100], lines 4-8) and formatting data packets for



transmission to the CMTS in accordance with the extended protocol if the CMTS does not support the extended protocol (*setting the packet type as a common media access control packet and transmitting the packet without performing suppression when the second packet is a failure message*, figure 4, element 409, paragraph [0100], lines 9-13).

Bunn fails to disclose sending messages in Ethernet packet format. Figure 1 shows that an Ethernet packet with an EH\_TPYE field is used to transmit PHS rule. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the message of Bunn to have Ethernet packet format since Ethernet packet is commonly used between a CM and CMTS in cable network.

Re claim 7, Bunn discloses a message indicating whether or not the CMTS supports the extended protocol (*the second EH\_TYPE packet comprises a success or failure message*, paragraph [0100], lines 1-4).

Re claims 8 and 12, Bunn discloses a CMTS transmitting a message until it receives a response from a CM (*the sender continuously transmits the first EH\_TYPE to the receiver until the second EH\_TYPE packet is received from the receiver*, paragraph [0103], lines 1-6).

Re claims 9 and 13, Bunn discloses a step of determining that the receiver cannot support an extended protocol when a second packet is not received from CMTS (*a step of the sender determining that the receiver cannot support an extended protocol a new payload header suppression rule when the second EH\_TYPE packet is not received from the receiver for a predetermined time*, figure 4, element 406).



*Allowable Subject Matter*

10. Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, set forth in this Office action.

11. Claim 10 is allowed.

The following is an examiner's statement for reasons for allowance.

12. Claims 10 and 14 are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest transmitting a first EH\_TYPE packet according to change in a payload header suppression rule to a receiver when the payload header suppression rule changes in the case where communication is performed between a sender and the receiver, checking whether there exists an error in the first EH\_TYPE packet, determining whether to apply a new payload header suppression rule, and transmitting a second EH\_TYPE packet to the sender, wherein the first EH\_TYPE packet transmitted and received by the sender and the receiver is set as the packet whose EH\_TYPE is 7, the second EH\_TYPE packet is set as the packet whose EH\_TYPE is 8, and the third EH\_TYPE packet is set as the packet whose EH\_TYPE is 6 when the sender transmits the data to the receiver' and wherein the first EH\_TYPE packet is set as the packet whose EH\_TYPE is 7, the second EH\_TYPE packet is set as the packet whose EH\_TYPE is 8, and the third EH\_TYPE packet is set as the packet whose EH\_TYPE is 5 when the receiver transmits the data to the sender.



*Response to Arguments*

13. Applicant's arguments with respect to claims 6-9, 11-13, 15 and 16 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

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Patent Examiner  
12/19/06

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